ABSTRACT

A device for enhancing removal of liquid from fabric utilizing mechanical and aerodynamic techniques. A base plate contains one or more apertures to which a vacuum is applied for extracting water from the fabric. The total cross-sectional area of the apertures is selected to be that which will increase, and preferably maximize, the extraction power for the vacuum motor with which said base plate is to be utilized. The number and shape of the apertures is selected to reduce the ratio of the total distance along all the perimeters of said apertures to the total cross-sectional area of said apertures in order to reduce boundary layer drag. The cross-sectional area of each of said apertures is selected to be large enough to permit solid contaminants that can be expected to be in the liquid to pass through said apertures without clogging said apertures. Barriers are attached to the bottom of the base plate to force any liquid in the fabric toward the apertures as the base plate is moved across the fabric. And the construction of the barriers is such that each barrier has only a small surface area that will contact the fabric generally perpendicularly to the original orientation of such fabric. This last factor combines with the fact that apertures exist in the base plate, to increase the pressure created when a given force is applied to the Extraction Device and, therefore, to increase the penetration of the base plate of the Extraction Device into a fabric.